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A FEW WORDS ON BANTINGISM AND OBESITY.

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[Communicated for the Boston Medical and Surgical Journal.]

Since Mr. Banting published in England his, I might almost say, undeservedly popular letter on the dietetic treatment of obesity, a number of physicians have written on the subject, and attempted to prove to the public that we did not need Mr. Banting to enlighten us on dietetics, and that we knew everything contained in his letter, long ago, even better than he. Among the numerous, more or less scientific, articles of the kind which I have had occasion to read in different languages, I have, however, found scarcely one which makes the dietetic doctrine more palatable to the non-professional man than does Mr. Banting's letter itself. On the main point they all agree with him, viz., that vegetable diet, containing sugar or starch, produces fat, while animal food does not. From the perusal of all these treatises the public will, therefore, draw no other conclusion than that, in order to become fat, the former, and to become thin, the latter diet is exclusively to be adhered to. To this conclusion I shall now take the liberty of adding a few observations drawn from practical life.

First. In order to remain healthy and vigorous, the system needs for its nutrition a variety of substances, the constituent parts of which resemble, as nearly as possible, those which exist in the body itself. If a person, therefore, use a kind of food, not containing these constituent parts in a correct proportion, of course the nutrition of his body will be performed in an imperfect manner, and he will not only lose flesh, but his health will also suffer, more or less, from such an incomplete regimen.

We therefore not only see those people growing thin who live exclusively on meat, but also those who partake solely of bread or potatoes, notwithstanding the greater proportion of fat-forming ingredients existing in the latter articles. Proofs of this are to be seen in the exclusive vegetarianism of the Hindoos, in the poor German weavers and other inhabitants of mountainous regions, who rarely see a bit of meat, and in prisoners living on bread and water, notwithstanding they lead a sedentary life, which should predispose them to obesity. In thirty years, during which my sojourn in water-cure establishments has given me ample opportunities for making observations on diet, I have found that the majority of corpulent individuals were great consumers of meat; and in most cases, under a suitable course of water treatment, and by a simple vegetarian diet, with partial or entire avoidance of animal food, I have succeeded in reducing the weight, and at the same time also in improving the general health of the patient. Thus, but a short time ago, a gentleman from St. Louis, under an exclusive vegetarian diet, was reduced in three months from 295 to 225 pounds, while a fat New York gentleman, under a less strict regimen, lost 20 pounds in a fortnight.

Secondly. Nearly all people, or at any rate all who have the means, *eat too much*, and those who live on one kind of food are even obliged to eat too much, in order to draw from their articles of diet, which do not contain the materials composing the body in a correct proportion, a sufficient number of those materials which they would have obtained from a much smaller quantity of mixed food. *He, therefore, who partakes only of one kind of food is compelled to eat more than is healthy for him*, unless he wishes to crave for those substances which his system imperatively demands for the replacement of the daily waste of tissue.

Thirdly. It is a well-known fact, that dogs fed exclusively or principally on meat become diseased about the eyes, as well as in other parts of the body. This is the case particularly with large dogs, when they have little or no exercise. I myself, within two years, have lost two Newfoundland dogs, who had all the physical signs of toxæmia, and who gradually died. In one of them, the first signs of disease appeared in the tail, which lost its hair, became ulcerated and extremely offensive, on which account it was amputated; without relief, however, to the poor fellow, notwithstanding his frequent use of water treatment in the clear mountain stream which flows by my establishment. In the other dog, an abscess formed in the neck, of such size as to make his death unavoidable. No physician will deny that the excessive use of meat will produce also in man a predisposition to inflammatory and putrefactive diseases, inasmuch as he knows that in such disorders the use of animal food is limited or even entirely prohibited. What, then, becomes of the excess of animal food which does not furnish in correct proportion the substances absolutely essential to the nutrition of the body? In my opinion, it produces a diseased condition of the vital fluids, like everything taken in excess, but more so even than a purely vegetable diet. Whether or not this be the case with Mr. Banting, I do not know; I hardly think, however, that he will make an exception to the rule, and that, sooner or later, if he is inclined to be candid, he may be able to write us a less encouraging letter than the one which gave occasion for these remarks.

Fourthly. An animal diet does not agree with all persons disposed to corpulency. This especially applies to gouty and plethoric individuals, with whom this kind of food and good living generally must be considered as both the cause and the abettor of their ailments. Recent investigations have shown that the nitrogenous aliments (meat) by reason of their imperfect chemical combination with oxygen, are the chief producers of uric acid, which, accumulating in considerable quantity in the blood, causes the characteristic painful attacks, which do not disappear until by a rigid diet, free perspiration, and other excrementitious processes, the system has become rid of the acid. If this theory (that of Liebig and the Vienna school) be correct (and I have found it confirmed by my own experience), then the advice to corpulent persons disposed to the formation of acids, to eat exclusively or chiefly animal food, is a very poor one; for its adoption would make their principal trouble incurable.

Fifthly. If corpulent persons are to be advised conditionally, only, to follow Mr. Banting's example, and if in a country, the inhabitants of which are already inclined to eat much more meat than is good for them, it be a hazardous undertaking to say anything against this particular kind of food, what, then, are those people to do to whom their obesity is not only disagreeable, but also dangerous, especially if there be a predisposition to apoplexy or paralysis? They should eat less and take more exercise, but at the same time adhere to their mixed diet, or, if they be inclined to acidity of the stomach or of the blood, live for a time on a less nutritious, vegetable diet. Such people usually say that they eat extremely little. In most cases this is a delusion, and even those who really eat little, still eat too much—for their particular case. A man cannot grow fat on nothing, and, the less a man eats the less adipose tissue will be produced, even if he be unable to take much exercise. This principle, above all, must be observed by every corpulent person. And if he be able, he should take active exercise, such as walking, swimming, gymnastics, fencing, &c., but especially walking. If this be too much for him, he should ride on horseback or in a carriage, practise calisthenics with dumb-bells, clubs, or, according to Schreber's method, without any instruments. At the same time, the avoidance of the principal fat-forming aliments, such as sugar, starch, butter, milk, and other highly nutritious articles, or, at least, their very moderate use, and, on the other hand, the adoption of a diet of salads, pickles, oranges, apples, and other fruits, and of less nutritious vegetables, without confining himself too closely to them, are circumstances which will materially aid his purpose.

Cold baths, followed by exercise, also diminish the size of the body, inasmuch as the reaction following them increases the metamorphosis of tissues. If it appear necessary, the temporary administration of some mildly laxative mineral water (Congress water, or a small dose of a solution of sulphate of magnesia, diluted with water) will be of value. However, this should be determined by the scientific and experienced physician, as well as the advisability of a carefully-conducted course of water treatment, during which, however, the patient, probably disposed to apoplexy on account of his obesity, should neither be kept wrapped up in a pack for five hours, nor be plunged head over ears into a cold bath. A sojourn of several weeks, not to say months, in a water-cure establishment is advisable, if for no other reason than for the diet and the exercise in pure mountain air.

Sixthly. A steadfast, firm will, and a manly perseverance, both on the part of the physician, and especially also on that of the patient, are indispensable to an appropriate regulation of the diet and mode of life, generally. "That reminds me of a little story," as our good President Lincoln was wont to say.

A distinguished physician was called into the country to visit a farmer, who, having become wealthy, had, in accordance with his improved worldly condition, gradually accustomed himself to taking more and more of the good things of this life, until, in consequence, he became afflicted with a very inconvenient amount of fat, and with various other ailments, both bodily and mental. After a careful examination, the physician declared that his patient was living too well, and that a gradual return to his former simple and moderate mode of life would remove not only his obesity, but also his corporeal and mental sufferings. Half convinced of the truth of the doctor's advice (although he would rather have swallowed a few doses of medicine), he began to express his doubts as to the feasibility of the plan of gradually diminishing the *quantity* of his food, and his ignorance as to the way of doing it. "How many dumplings do you generally eat?" asked the physician (this happened in Saxony, the land of potato dumplings the size of a man's fist). "Twelve," answered the peasant. "Well, henceforth," said the doctor, "eat but eleven, and have them made a little larger."

Such is, only too frequently, the advice of the physician on the subject of diet. And, even if he give it in a decided and proper manner, the patient will still find means to interpret his words according to the above example; and thus there is no end to the obesity, the pyrosis, the dyspnœa, the troubled sleep, the irritable temper, the complaints, and—the emetics and laxatives.

June 6th, 1865.

MR. SOLLY'S CLINICAL LECTURES ON SCRIVENERS' PALSY.

[Continued from page 201.]

LECTURE II.

GENTLEMEN,—Again returning to the subject of scriveners' palsy, I will relate another case, as it illustrates the main characteristics of the disease very forcibly, and also shows that the malady is more easily cured, when detected early.

Mr. Q——, aged 25, single. Parents alive and healthy, and on his father's side very long lived; he has a grandmother aged 92. His habits have always been regular and steady, taking beer with his meals, but not spirits. He smokes very little now, and did not smoke at all when he was first attacked. He has been engaged in mercantile business since he was 14 years of age, but previously to going into the —— Bank (which he did about five years ago) he was in a large wholesale house. In this house he had less writing and more active exercise. After he had been in the service of the bank about a year, he complained of an uncomfortable sensation in the upper arm of the right side, but not at first in the hand and fingers. This discomfort was succeeded by violent trembling in the muscles and tendons of the hand and arm, accompanied by a sensation of extreme fatigue in the limb, as if he had been using some violent physical exertion, rendering the arm and hand completely numbed. This numbness was so complete that he could pinch and prick the fingers without feeling anything. At last it became so bad that he could not hold his pen. When these symptoms first commenced they would all retire at night, and, with rest and sleep, he would feel pretty well in the morning; but ere long even this relief was denied him, and he commenced business in the morning with some discomfort. When, at last, the handwriting became so bad that he was ashamed of it, he sought my advice.

I recommended a complete change of air and scene, which through the great kindness of those who claimed his services, he was enabled to effect. After the lapse of two months away from his writing occupation, during which time he was benefiting by the bracing sea air and bathing at Brighton, he almost entirely recovered. Since that time (beyond an occasional return of the symptoms in a mild degree, after using the pen without cessation for any lengthened period) he has not experienced sufficient inconvenience to lead him to fear a return of the disease. He has not so much writing to do now as formerly, and writes an excellent hand without difficulty.

The next case does not tell much for our medical treatment of such cases, though it shows that with rest they will recover. I have no doubt that the pen he speaks of was of service, but I do not believe that it would have effected a cure if it had been alone employed in the first instance. Coming after the rest, the pen was certainly of use. This patient shall tell his own story in his own words, which are:—

"I entered the service of the —— Bank in November, 1859. About the middle of 1860 I began to experience an involuntary pressure of my thumb upon the pen while writing, which increased until it was so violent as to be very painful, and I was compelled to hold the pen with my fingers, without using the thumb. The thumb then doubled itself into the palm of the hand, causing much pain. These sensations were experienced only while writing, or when holding any article between the finger and the top-joint of the thumb. At this time I was at ——, in Essex, and I sought the advice of a surgeon, who gave me a liniment; but this not proving efficacious, I went to another, who also gave a liniment, and advised me to hold my arm under a stream of cold water, and have it rubbed with the hand in a brisk manner. This was done twice a day for some time. In November I was removed to the head office, and I cannot remember whether it was before or after this that my thumb so far improved that I could hold the pen with my fingers without the contraction of the thumb upon the palm before complained of.

"On Feb. 21st, 1860, I first sought your advice in the matter, when you advised me to write as little as possible, and gave me a prescription [this was the third of a grain of strychnine], stating my case to be an attack of scriveners' palsy in a slight degree. On the 25th you increased the dose [to the sixteenth of grain], and directed me to leave off writing for a fortnight. This medicine caused twitchings of the muscles of the face, and on April 5th you gave me another prescription [the twelfth of a grain of the bichloride of mercury]. On the 16th of April you advised me to try galvanism, and by the kindness of Mr. Wood, of Cheapside, I was allowed to go to his shop and have the use of one of his instruments for a fortnight to try its effect. At first it appeared beneficial, but the effect was not permanent.

"During this time I had been writing with my left hand, but I began to feel an unpleasant sensation in my left arm, and you advised me that I must discontinue it.

"On May 9th you gave me small doses of colchicum, and on the 28th tincture of iron. The latter, however, I did not use, as I left the bank on the 31st, and went to my home in the country.

"In July I started on a voyage to the Canary Islands, the journey out and home occupying six weeks. This did not appear to produce any especial good at the time, but I think it had a beneficial effect upon my general health.

"I re entered the service of the bank in September, taking a post requiring but little writing; and in the same month I attended an orthopædic hospital, and was seen by Mr. —— and Mr. ——. One of these thought the extensors were withered, but the other differed from him. I was put under the care of Mr. ——, and various trials were made of a spring fixed on a glove, intending to prevent the thumb from contracting. But no success attended these efforts, and in January, 1862, I ceased my attendance.

"In February, I purchased Perry's 'Orthodactylic' penholder, the peculiarity of which consists in three small plates affixed to the holder in the places where the thumb and fingers should rest. About this time my thumb rapidly improved, and in March I was able partially to resume my duties at the books. In April, 1863, I re-entered upon full duty at the desk, since which time I have experienced no inconvenience from the usual labors of the office. [He now writes an admirable hand.]

"A medical gentleman suggested to one of the clerks that the disease might perhaps be caused by the contact of the thumb with the steel pens which are used in the office (Mitchell's barrel pens); and since then I have used a quill over the barrel of the pen as a protection, and others of the clerks tell me that they have derived benefit by doing the same.

"*Note.*—My habits have always been quiet and regular; no smoker; a teetotaller. In youth I grew fast, and was of not very robust health, though not subject to very severe illness. , My father was afflicted with nervousness; mother healthy.

"C. W——, Dec. 14th, 1864."

Very little has been published on the pathology of this disease in the English language. Virchow,* in his handbook of special pathology and therapeutics, has an article upon it; but this, unfortunately, throws no light upon the treatment of this formidable disease. He confirms my opinion that the act of writing is dependent on the co-ordination of several muscles: saying, "Notwithstanding the combinations necessary for this purpose become by degrees so habitual that a conscious separation of the single acts is not possible to the mind, it appears as if the rhythm of it, as it is learnt with difficulty, yet it in no way approaches the proper automatic movements—such as breathing, &c. Writing requires always a constant attention, which becomes more or less mechanical." This author, also, refers to an irritability of the upper dorsal region of the spine, sometimes induced by over-practising on the pianoforte, as indicated by pain in that region and morbid contractions of the fingers. I have seen such cases, and may mention, as a digression from our consideration of its pathology, that I always prescribe nervine tonics and rest from that kind of action of the muscles—but not entire rest of the limb; active exercise in the open air, with a hoop where it is possible, and calisthenic exercises of all kinds.

This aching in the spine may also be observed in connection with scriveners' palsy; and the fact is important, as I shall explain further on. Very little consideration of the subject of scriveners' palsy is needed to convince us that the disease is not a simple paralysis of muscular power. The patient can call all his muscles into action; but he cannot bring them all into such *harmonious* action as to be able to write. What is the reason of this? I must not, even in a clinical lecture, take it for granted that you are all well up in the physiology of the brain and spinal cord, and I am sure I need not ask forgiveness of those who are, if I go a little into the A B C of the matter.

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* Virchow: Handbuch der Speciellen Pathologie und Therapie, vol. iv., p. 142.

The physiological and pathological explanation of this disease is not given by Virchow. It must be sought in the newest discovered mines of nervous lore. I believe that I was one of the first to insist upon the distinct office of the cineritious and medullary neurine, and I felt that this was the more necessary, inasmuch as Gall and Spurzheim, those grand pioneers in nervine anatomy and physiology, omitted to adopt this view. They merely spoke of the cineritious neurine as the womb or producer of the white, not, as is now universally acknowledged, the real and sole source of power. Much has been discovered lately in regard to the physiological action of this gray neurine—the vesicular portion of the nervous system, and its relation to the tubular, especially as regards the spinal cord. The spinal cord, as I suppose most of you know by this time, is not merely a large nerve or large bundle of nerves—in other words, it is not merely a conducting instrument. It consists of the two kinds of neurine, the tubular or conducting neurine and the vesicular or dynamic neurine; the white or tubular neurine, the gray or vesicular neurine. I remember when Marshall Hall first enunciated his views and discoveries regarding the especial power of the spinal cord in the production of what he called its excito-motory power, I said, "Well, if you are right, the instrument of that power is the grey matter of the cord." To which he replied, "I know not at all what is the instrument of that power, or in what part of the cord it is developed; I only know of its existence, and that I have proved." Since then the grey matter has been proved to have that function, but it has been proved to have another distinct from it. It is this power and the machinery of it, so to say, that you must understand, if you do not do so at present, before you can understand what I believe to be the physiology and pathology of scriveners' palsy.

Ever since the days of Hippocrates it has been known that if the fibres of the brain are torn through by an irruption of blood into their substance, the communication by which the will flows to the muscles is cut off, and the muscles supplied by such fibres are paralyzed. Until a very late period, it was supposed that the cerebrum and the tubular fibres of the spinal cord were the only instruments concerned in producing the action of muscles. Latterly, however, the physiologist has felt convinced that there must be some additional instrument concerned in the transaction; some instrument for co-ordinating or combining the action of muscles. The cerebellum has now, by almost universal accord, a portion of this power attributed to it. Schroeder Van der Kolk does not consider that all the credit is due to the cerebellum, but that the vesicles of the cord also have their share in it. I confess that I think so too. The exact proportion in which this power of co-ordinating muscular action is possessed by these centres, I suppose no one will at present pretend to decide. I expect that morbid anatomy, unveiled by the microscope, will clear up a great deal that is yet obscure. Romberg, who gives a short notice of writer's cramp in his work,* mentions a fact which shows that it may take its origin in the cerebellum:—"Paralysis of the upper extremity, dependent on a cerebral or spinal affection, frequently commences with impaired power of conduction in the motor nerves of the fingers, and consequent difficulty of writing. A man was under my care whose disease lay in the cerebellum, and made its *debut* with an impairment in writing." It will only be by the accumulation of such facts that the mystery will be unveiled.

In the present state of our knowledge of the symptoms which attend scriveners' palsy, I think we are justified in believing that the disease commences in the cord. We find that most of the patients have felt some uneasiness in the lower part of the cervical region and in the upper part of the dorsal. There is seldom any complaint of discomfort in the head, either in the occipital region (the seat of the cerebellum), or in the frontal. Still it must be allowed that the whole question of its pathology is very much in the dark, though I hope before long a *post-mortem* examination may help us out of our dilemma. Without, therefore, now attempting to decide whether the nervous power which co-ordinates the muscles of the writer resides in the cerebellum or the spinal cord—though I am inclined to favor the latter hypothesis—we will consider the nervine arrangement by which it is in all probability produced; and though I shall describe it as existing in the spinal cord, still there is no reason to doubt that to a certain extent the same physical arrangement exists in both dynamic centres.

Lockhart Clarke and Schroeder Van der Kolk were, I believe, the first to explain clearly the nervous mechanism, if I may so express it, by which a group of muscles are made to act in such unison that complicated actions are produced in perfect harmony. The first-named gentleman originally demonstrated the actual connection of the nerve tubules with the nerve-vesicles. Schroeder Van der Kolk followed it up and reasoned upon it.

We are so accustomed to see all muscular actions harmonious, that we neglect to consider the means by which this result is obtained. Let us consider the act of volition, and how it is carried out. I will state the matter briefly and dogmatically. Will springs from the action of the hemispherical ganglion or cortical substance of the hemispheres of the brain. It descends along the white fibres of the hemispheres through the corpus striatum, crura cerebri, pons Varolii, and medulla oblongata, where it crosses from one side to the other, and then descends in the cord to the vesicular neurine in the interior of the medulla spinalis. Now I must have recourse to a diagram on the black-board. You will see by this diagram that I represent a nerve-fibre coming down from the brain, joining the nucleated vesicles, those ministers of power in the substance of the cord, the cineritious neurine. I think it right to repeat these terms frequently in order that they may be household words engraved on the tablet of your memory. From these vesicles you see other and more numerous nerve-tubules arising; these go to all the numerous flexors and extensors of the hand, which produce the act of writing. If the nerve-tubes went directly from the cord to the muscles of the hand, those muscles would act, but they would act spasmodically, not harmoniously. The instrument, then, which produces all this harmony, which co-ordinates the muscular action necessary to writing, whether good or bad, are the nucleated vesicles. It is no sound argument against this theory that the act of writing does not come by instinct, like the acts of the lower animals, but that the child has to learn to write—in other words, that these vesicles have to learn their co-ordinating duties. Is it not so with the brain itself? The child cannot reason and think accurately as soon as it is born. The ganglionic cells of the hemispherical ganglia have to be educated just as much as any other part of our living mechanism.

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* Manual of the Nervous Diseases of Man. By M. H. Romberg, M.D. Translated by Dr. Sieveking for the Sydenham Society, vol. i., p. 321.

The observations of Schroeder Van der Kolk, to which I have referred, are given by him in the work published by the Sydenham Society, and translated by Wm. Davies Moore, Esq., M.B.* As I hope you will all take the first opportunity of reading this admirable treatise, I shall not give the author's words at length.

The main point on which you should have a clear idea is this:—That the nerve-fibres which you trace with your dissecting knives into a muscle or group of muscles, do not spring directly from the brain, or run without interruption from it. These nerve-fibres spring from "a group of mutually connected ganglionic cells, which cells receive the impressions of our will along the anterior white columns." These impressions or stimulations being thus distributed uniformly over all the cells of a group, produce in all the motor filaments of a nerve arising from this group a uniform and simultaneous action.

The number of these anterior conducting filaments of volition must thus be proportional to the number of the group of cells, and the several combinations of which they are capable. The greater size of the anterior gray cornua in the cervical and lumbar enlargements of the spinal cord are accounted for by this fact.

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* Professor S. Van der Kolk on the Minute Structure of the Spinal Cord and Medulla &c., p. 81.

If we accept this view of Schroeder Van der Kolk of the anatomy and physiology of the spinal cord, confirmed as it is by the earlier and later descriptions of Lockhart Clarke, we are, I think, justified in believing that the writer's palsy must depend upon the disturbance or actual disease of these spinal cells. I must not, however, enter upon this part of the subject in this lecture, but reserve it for the next.—*London Lancet.*

[To be continued.]

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

MAY 8th.—*Hermaphrodite Pig.*—Dr. J. WYMAN exhibited and described the sexual organs of an "hermaphrodite" pig. The pig was about six months old, and outwardly had, in addition to the vulva of a sow, a testis on either side. The following condition of the genital apparatus was shown on dissection:—

1st. Two well-developed testes, and to each there was an epididymis, ending in a vas deferens following the usual course, and a vesicula seminalis.

2d. A two-horned uterus of a somewhat small size, its muscular coat very imperfectly developed; the cornua arched to the right and left, and accompanying the vasa deferentia passed out of the abdominal rings, gradually contracted to a point without an opening, but were attached to the epididymis by a slender ligament.

3d. The uterus and urethra opened into the vagina, one behind the other, at the same point, at which also ended the vasa deferentia, the orifices of these being in the septum between the uterus and urethra; the vesiculæ seminales were attached to what might be called the neck of the uterus.

4th. The urethra was prolonged by two folds of mucous membrane a short distance on the anterior wall of the vagina, but after this there was no distinction between the genital and urinary passages.

5th. The vagina was muscular and thick, opened outwardly by a small orifice at the vulva. The penis was about four inches long, crooked and attached by two crura to the pubes; it ended at the vulva, from which it slightly projected.

6th. Two Cowper's glands existed, and were covered by a thick muscular bag.

This kind of monstrosity is rare in pigs, but is not uncommon in goats.

In such cases as the above, the co-existence of vasa deferentia and vesiculæ seminales with the uterus, show that their different parts are not one and the same morphological structures.

The uterus, with its cornua ending in a blind point, may be considered as a persistent condition of the ducts of Muller, which have grown to a large size, their free ends not having opened into the peritoneal cavity.

There were neither ovaries not prostate gland.

MAY 22d.—*Encephaloid Disease of the Stomach.*—Dr. JACKSON showed a cast in plaster of the organ, and gave the following history of the case, which he had received, with the specimen, from Dr. H. E. Davidson, of Gloucester:—

Mr. R., æt. about 53 years; engaged in the fishing business, and enjoyed good health until about two years before his death. Earliest symptoms were pain in epigastrium, coming on about two hours after eating; occasional vomiting; torpor of bowels.

Sept. 1, 1863, Dr. D. was called in the night; pain in stomach very severe; and had vomited several times; relieved by an opiate. From this time his health steadily declined. In the spring of 1864, he was much depressed by the loss of his wife. During the summer he attended somewhat to business, but could do no manual labor.

Oct. 10th, 1864, Dr. D. was called to attend him. Found him much emaciated, anæmic and sallow. Had not left his house for some weeks, and kept the recumbent position most of the time. Could keep nothing solid upon his stomach, and was using milk, which caused less distress than any other food. Had much dizziness on standing. Bowels very constipated; great distress with dejections, and often followed by blood. On examination, the abdomen was found quite flattened. To the left and a little above the umbilicus, a tumor, of the size of a large hen's egg, was quite evident; and pressure upon it caused uneasiness. All the rational signs clearly pointed to obstruction of the pyloric orifice of the stomach, probably from malignant disease, as the cause of the symptoms; and, although the tumor did not occupy the position of the pylorus in its normal condition, I could rather suppose a dislocation of this portion of the stomach than attempt to explain the case in any other way.

From the above date until his death, which occurred on the 28th of March, there were no new developments, nor was there ever any sudden change. The anorexia was complete, and no food was taken, excepting milk. The pain required the sulphate of morphia in increasing doses. Constipation continued, and was the occasion of much distress.

On examination, the stomach, and to some extent the pancreas, were the only organs diseased.

Mr. R. has had relatives die of cancer, but neither parents, brothers nor sisters; one uncle, over 70 years of age, has now cancer of the nose.

Dr. J. described the disease as a well-marked, soft encephaloid, involving the whole circumference of the stomach, and extending from the pylorus about four inches; well defined, quite thick, and rough upon the surface.

He had taken a cast of the specimen on account of the situation of the disease. Except in a very few cases, in which it was situated at the cardiac orifice, he had found it, almost without exception, in the small curvature, and about midway between the two orifices; as a defined, elevated, circular mass, three or four inches in diameter. This, Dr. J. remarked, is a very important pathological fact, if it is the rule and not the exception, as it explains the remarkable want of correspondence of the symptoms, if not the latency of the disease, that is not unfrequently observed in this form of cancer. In "scirrhus," on the contrary, the disease is found to affect the pyloric portion of the organ, as in Dr. Davidson's case, and the symptoms are accordingly urgent; the parietes of the organ are disorganized throughout their entire circumference, and cannot contract upon and carry forward the contents into the duodenum.

In regard to the situation of the tumor in Dr. D.'s case, Dr. J. remarked that it certainly was not where we would naturally expect to find it. Many years ago he spoke to Dr. James Jackson of a case of scirrhus of the stomach, in which the tumor was upon the left of the median line; and Dr. J. referred him to a small monograph upon the subject of this disease, by Chardel, a French author, and in which this fact of the situation of the tumor upon the left side is spoken of. Since that time Dr. J. has particularly observed the situation of the tumor in this form of cancer, when one existed, and he has never found it upon the right side, but always upon the median line if not upon the left side; in one case it was so far to the left side that it could not be felt, unless the patient lay upon the right side, so as to cause the diseased organ to be drawn out from the left hypochondrium. This, again, is an important diagnostic fact, if it is the rule and not the exception.

JUNE 12th.—*Laceration of the Uterus.*—Dr. WHEELER reported the following cases:—

"A few weeks since I saw, in consultation, a woman with a deformed pelvis, about 32 years of age, and at the close of her fourth pregnancy. Her first labor was difficult and lingering, and she was delivered with forceps; child stillborn. Her second was premature, less severe; a small child, which with difficulty lived. In her third pregnancy the child was large, labor difficult and tedious. She became exhausted. I perforated the head, and delivered the child with the blunt hook. In her fourth and present labor, when I saw her, she had been about twelve hours in severe pains, with a prolapsed umbilical cord, which had ceased to pulsate. The attending physician left his patient only a few minutes to obtain his forceps, when she experienced a sharp tearing pain in the upper part of the uterus, followed by nausea and faintness. The pulse was feeble and fluttering. Symptoms of general collapse supervened, with the cessation of all uterine action. I ordered stimulants, and found the child had not escaped into the abdominal cavity. The cord had receded, and the head was not engaged in the upper strait. I at once perforated, and delivered with the blunt hook. The placenta was readily removed, with little or no hæmorrhage. The patient gradually came up from the collapse, and a slight reaction came on, with tenderness over the uterus, and a tympanitic condition of the abdomen, followed by nervous excitement and slight delirium. Death took place in about forty-eight hours after the accident. We could obtain no autopsy, but from the previous history of the patient, the contracted pelvis, the present symptoms, and the subsequent termination of the case, there could be no doubt as to the probable laceration of the walls or of the peritoneal covering of the uterus.

"I met with another case of laceration of the uterus, in which the child escaped into the peritoneal cavity, a few years ago.

"The patient was a young, healthy woman, about 25 years of age, with full muscular development, but with a contracted pelvis. She had reached the end of her first pregnancy; the labor-pains had been continued, severe, and somewhat irregular for a period of six or eight hours. The vertex presented, but only a portion of puffy scalp was engaged within the upper strait.

"During a severe uterine effort, the patient exclaimed, 'something was tearing within her stomach.' She suddenly became pale, and almost pulseless at the wrist, with a death-like appearance of the face. All uterine action ceased. The head receded, or was not to be found in its former position, for the child had escaped into the abdominal cavity, and could be readily felt beneath its walls. From the shock, with the loss of blood, the patient survived only about thirty or forty minutes after the rupture took place. An autopsy, some twelve hours after death, revealed a perfectly healthy uterus, partially contracted down upon the placenta. Also, there was found quite a large transverse fissure in the wall of the left side of this organ. The abdominal cavity contained a large child, with several coagula of blood; which accounts for the sudden termination of the case. The antero-posterior diameter of the superior strait was narrowed to a mere fissure, hardly sufficient to pass the hand.

"Obstetrical authors give directions 'to pass the hand into the womb, through the rent, and to seize the feet and forthwith deliver.' This is a procedure more easily described than performed. For even in a well-formed pelvis, with an uncontracted uterus, and all other circumstances favorable, it must require skill and boldness. In this case, the Cæsarean section was the only alternative and the forlorn hope of saving the child; but time, as well as the friends of the patient, failed to give consent for the operation."

June 12th.—*Voluntary Dislocation of the Hip.*—Dr. Hodges showed some photographs of a man who was able to partially dislocate his hip at will, which were sent by Dr. Lyman, with the following account of the case:—

"John B. Parker, Private, Co. H, 148th N. Y. Vols., on the march from Bermuda Hundred to Drury's Bluff, May 13th, 1864, while skirmishing up a hill, sprang back suddenly, to avoid the gun of a comrade in advance. His left foot became entangled, and his weight dislocated his hip. He felt the injury, and supposed the joint was out. Some comrades pulled it in. He immediately resumed his skirmishing, and marched seven miles—from 10 till 6, P.M. He laid down at night, and went on duty the next day—sharp-shooting, crawling all day. He continued this kind of work five days, and returned to camp, when he was immediately put on entrenchments, and worked two days and nights. Afterwards he went on picket, and entered the hospital May 28th.

"He is able at any time to luxate the hip-joint, and does it by pressing the foot on the floor, to fix it firmly. He then contracts the adductors, throwing out the pelvis, when the head leaves the socket and goes on the dorsum."

June 12th.—*Hydrocephalus.*—Dr. Storer showed the photograph of a hydrocephalic child, and read the following letter descriptive of the case:—

New Orleans, La., May 11, 1865.

"Dr. D. H. Storer.—Dear Sir,—I send to your care, for presentation to the Boston Society for Medical Improvement, a photograph of an interesting case of hydrocephalus internus, which came under my notice here.

"The child, a female, is of Creole origin, in this city, with no black blood in either parent. The mother, young and healthy, has had one other child, healthy, which died young of some of the ordinary diseases of infancy. The father is also healthy, and was drafted and held to service in this city. There was nothing singular in the gestation, and nothing abnormal during parturition. Soon after birth the head began to enlarge, and has continued to increase, till, on April 30th, 1865, at the age of eleven months, the circumference of the head was 32 (thirty-two) inches. The child has four teeth, sucks and sleeps well; she is rather small of her age, tolerably lively, and seems to thrive well. Whether there be any affection of vision or hearing, or of the other senses, has not yet been ascertained.

"I shall watch this case with interest, and hope to obtain for the Society a *life-size* photograph of the head. I think already the circumference is among the largest on record, and it seems to be increasing. Yours truly, Samuel Kneeland."

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JULY 6, 186

The City Registrar's Report.—By far the most valuable annual document published by the City is the little pamphlet containing the Registrar's Report of the Births, Marriages and Deaths, and yet it is not generally distributed, and seldom receives that attention from the public which it deserves. To all who are interested in the growth and sanitary condition of our city, it presents facts and suggestions of the greatest importance, and which demand some other consideration from the body to which they are addressed than the usual vote of "laid on the table and 500 copies ordered to be printed."

For the last two years we have called the attention of our readers to the diminution in the number of births since the war began; this year the change is still more apparent. In 1861 the number of births was 5,789, 5,258 in 1862, 5,255 in 1863, and 4,992 in 1864, or 263 less than those of the preceding year, and 287 less than those of 1850, when the population was only 136,000. Comparing this number with the 4,787 deaths of last year, we find that the population of the city has been increased by birth during the year only by 205. Of these births but 32 per cent. of the fathers were native-born, and in Wards 1, 3, 4, 5, 6, 7 and 8 the number of births was, as usual, exceeded by the number of deaths. The number of colored children born was 15 less than the preceding year, whereas there were twice as many marriages and three times as many deaths as births among this class.

The number of marriages during the year was 2,736, an increase of 414 over 1863. Of the grooms but 302 were born in Boston, while 1,396 of the same were foreigners.

The mortality during the year was 5,111, or one in 87·17 of the population, an increase of 412 over 1863, and 991 above that of 1862. This, as in previous years, is an unfavorable result when compared with the cities of New York and Philadelphia, both three or four times larger than our own, for the percentage of the former was 35·49, and of the latter 35·26. Table VIII., which exhibits the sex and age of those who died, illustrates in a very striking manner the greater longevity of females, if arranged in the following manner :—

	Males.	Females.		Males.	Females.
Under 1 year,	558	517	40 to 50	240	166
1 to 5	601	515	50 to 60	189	138
5 to 10	134	136	60 to 70	147	143
10 to 15	45	43	70 to 80	86	121
15 to 20	72	72	80 to 90	32	64
20 to 30	285	263	90 to 100	7	15
30 to 40	269	253	Total,	2,665	2,446

The causes of death are thus stated :—Accidents, 190; abscess, 16; apoplexy, 63; anæmia, 12; aneurism, 4; amputation of thigh, 1; asthma, 8; bowels, inflammation of, 45; do. disease of, 13; brain, inflammation of, 45; do. congestion of, 79; do. disease of, 138; bronchitis, 122; bladder, disease of, 8; blood, disease of, 5; bone, disease of, 2; cancer, 50; cholera infantum, 268; cholera morbus, 15; colic, 2; consumption, 859; convulsions, 176; croup, 169; cyanosis, 14; debility, 41; diabetes, 3; diarrhœa, 140; diphtheria, 118; dropsy, 112; do. of brain, 174; dysentery, 104; dyspepsia, 5; epilepsy, 11; erysipelas, 40; exhaustion, 13; fever, bilious, 9; do. scarlet, 225; do. typhoid, 107; do. typhus, 10; gastritis, 13; gangrene, 14; gravel, 2; hæmorrhage, 33; heart, diseases of, 142; hernia, 2; hip, diseases of, 5; homicide, 10; infantile diseases, 74; inflammation, 6; insanity, 12; intemperance, 55; kidneys, diseases of, 43; liver, diseases of, 35; lockjaw, 2; lungs, inflammation of, 292; do. congestion of, 90; do. diseases of, 13; lupus, 1; malformation, 12; marasmus, 119; measles, 46; neuralgia, 3; old age, 79; ophthalmia, 2; paralysis, 63; peritonitis, 25; phlebitis, 1; pleurisy, 12; premature birth, 49; puerperal disease, 36; purpura, 7; prostatitis, 1; rheumatism, 13; scrofula, 26; skin, disease of, 4; smallpox, 113; sore throat, 32; spine, diseases of, 11; stone, 2; suicide, 13; sunstroke, 3; syphilis, 14; stomach, diseases of, 9; teething, 18; thrush, 5; tumor, 12; ulcers, 2; uterus, diseases of, 9; unknown, 87; whooping cough, 26; wounds (gun-shot), 7.

The concluding part of the report is given to a consideration of the rapidly increasing infantile mortality of our city, and Mr. Apollonio deserves the thanks of the community for the pains he has taken to lay this important matter before the public. It appears by the table he furnishes, "that in only one year—1837—did the mortality among children under one year approach the ratio of deaths at the same age at the present time. In 1819, 1822, and 1823, the deaths of children of that age were less than five per cent of the whole mortality of each of those years respectively. From 1840, the ratio, with occasional variations, has been gradually increasing, until, at the present time, it amounts to more than 21 per cent. Can there be any satisfactory reason assigned for the fact, that in a series of years, from 1819 to 1825, the ratio of deaths of children under one year should be as low as 4.18 per cent (and never reaching 10 per cent), while in 1864 it should exceed 21?"

"This feature is not peculiar to Boston, but is witnessed, to a greater or less extent, in all populous cities. So common and unvarying has been this great mortality among children, that the impression has become very general that the result is not an unnatural one, but is what might be reasonably expected. If a reason were asked for this popular impression, something would be said regarding climate, exposure, heat, cold, cleanliness, &c., but accompanied with such a manifest unacquaintance with the whole subject as to startle every one who sincerely believes that no necessity exists that 43 per cent of the deaths should be of children under five years of age. There has long been much speculation regarding this lamentable waste of life, and, as might have been expected, great diversity of opinion has prevailed. Differences have not been so great regarding its proximate causes as its remote, or superinducing ones. At the same time, with all this diversity, so fully and freely expressed, little of a practical character has been suggested as a remedy. In the mean time, the fearful mortality continues, year after year, eliciting, with equal regularity, the same wondering remarks, followed, in the same manner, by general indifference and forgetfulness.

"A glance at the tables in this Report will show that the excessive mortality among young children occurs in overcrowded and badly ventilated houses, or in neighborhoods where little or nothing has been done to ensure proper drainage, cleanliness, and a sufficiency of light and ventilation.

"Light, air and cleanliness are the three great conservators of health. The absence of either causes disease, and, sooner or later, death. The means or methods by which a proper distribution of these three great elements of life shall be effected, are of the first importance, and should receive the most considerate attention from those to whose hands is entrusted a work which so deeply affects the moral and physical well-being of a community. The clearer this fact is seen, and the more fully it is appreciated, the more thorough and complete will be the machinery put in motion to insure the desired result.

"The tenements occupied by a large portion of the population, constructed as they are in localities the least favorable for health and comfort, and designed, it would seem, mainly to produce the greatest possible income, at the smallest possible outlay, are little better than so many pest houses. Very many of them seem to have been planned with a view to keep out both light and air, and are, moreover, so crowded with human beings as to render cleanliness almost an impossibility." * * * * * * * * * * *

"Indeed, it would be difficult to exaggerate the dangers that surround those who are compelled to inhabit abodes where they are obliged to breathe, over and over again, the same impure and fœtid air. It can surprise no one, who will take the trouble to reflect, that these places should furnish such abundant harvests of death. Exposed from the earliest infancy to an impure atmosphere, where they contract habits that naturally grow out of, and thrive in such condition, it need not surprise the most careless thinker that children thus born, and thus existing, should die before they had barely begun to live.

"The question now arises, Is there a remedy for this shocking state of things? and if so, What is it? It seems there is but one answer to these questions. Not in education, which some appear to consider as the great panacea for all the 'ills that flesh is heir to;' not in instructing, merely, those who are the greatest sufferers, by demonstrating to them that disease and death inevitably follow a persistent disregard of the laws of health; for such attempts will result as similar attempts have always resulted, in perfect indifference and apathy. The answer is, in a *rigid oversight and control of the erection of all dwellings*. It may be a question in the minds of some, how far public authorities may intervene in such a matter; but surely no principle is better established, or more strongly fortified by safe precedents, than that all private rights and privileges may be subordinated to the public weal. In other words, the State may, for its own safety and welfare, employ whatever means may seem best calculated to secure that end. In accordance with that right, she puts in operation the most elaborate and costly educational machinery, and requires that the child shall use it, not, indeed, solely for the individual benefit of the child, but for the good of the whole community, of which the child forms a part—wisely considering, moreover, that it is far cheaper (apart from the moral side of the question), to build schoolhouses than prisons and penal institutions. By the same right towns and cities invade private interests to open highways and streets for the public good, abate nuisances, remove persons infected with contagious or dangerous maladies, require the walls of buildings to be of proper strength, and constructed of suitable materials. Now, it would not be an indefensible exercise of this right, if one further step were taken, so that, hereafter, no dwelling-house should be erected unless furnished with means of ventilation, and provided with proper drainage.

"That the large mortality among children is primarily owing to causes alluded to above, there can be little reasonable doubt; and until such or similar means are employed to remedy the evil, no State or city, in which such a condition of things exists, fully performs its whole duty to its subjects. On economic grounds alone, every healthy person, as consumer and producer, adds so much to the material wealth of the State; and by parity of reasoning, the death of one such person is, to that extent, a subtraction from its wealth. Every child until old enough to work, is simply a consumer, and adds but partially to the aggregate wealth. It is, therefore, of the first importance that he should live and become a producer also."

Foreign Medical Intelligence.—Prof. Virchow states, as the result of the official examination of swine's flesh in Brunswick, that 12,747 hogs were inspected between Dec. 1st, 1863, and Dec. 1st, 1864, and only one of the number was found to be infected with trichinæ. Since then nearly 7,000 more have been examined, and another was found to be highly trichinous.

The disease of the Crown Prince of Russia was pronounced by Rayer and Nélaton, of Paris, to be rheumatism of the muscles of the back, but Prof. Oppoltzer, of Vienna, who was called to Nizza to attend him, diagnosticated cerebro-spinal meningitis, and the *post-mortem* examination, which was made by Pirogoff, fully corroborated the correctness of his opinion.

A severe outbreak of dysentery has recently occurred in a county asylum in England, caused by the effluvia from a field irrigated by sewage. The poison had a period of incubation in most cases before the dysentery appeared, of from three to five days. The morbid appearances most characteristic of this epidemic were—1st, a soft, membranous deposit on the mucous membrane of the intestines; and 2d, the diseased condition of the lower part of the small, as well as the large intestine in all the cases.

Dr. Bence Jones, in a lecture recently delivered at the Royal Institution, says there are good grounds for believing that there exists within us, in addition to the mechanical or animal circulation of the blood, another, and a greater and more strictly chemical circulation, closely resembling, if not identical with, that which obtains in the lower divisions of animals and in vegetables. A circulation in which substances continually pass from the outside of the body into the blood, and through the blood into the textures, and from the textures either into the ducts, by which they again pass into the blood, or are thrown out of the body; or into the absorbents, by which they are again taken back into the blood, again to pass from it into the textures.

M. Bouchut has recently read a paper at the Academy of Sciences, in which he gives an account of the application of the ophthalmoscope to the diagnosis of chronic hydrocephalus in young children. In this disease the circulation and nutrition of the eye undergo notable modifications, in consequence of the cerebral compression produced by the presence of fluid. When a patient was examined, the following changes in the eye were observable:—1. An increase in the number of the veins of the retina, which retain their usual color. 2. Sometimes a serous peripapillary infiltration. 3. Atrophy of the papilla and optic nerve. 4. Atrophy of the retina and choroid coat. In rickets, however, which often produces a large increase in the size of the head similar to the commencement of hydrocephalus, none of the foregoing alterations in the eye are to be found.

The tinctorial power of the salts of magenta is something marvellous. Mr. Field stated, in a recent lecture at the Royal Institution, that no dye he had examined, whether from the animal, vegetable or mineral world, could bear comparison for one moment with this crimson color obtained from aniline. One grain in a million times its weight of water gives a pure red; in ten millions, a rose pink; in twenty millions, a decided blush; and even in fifty millions, with a white screen behind the vessel in which it is dissolved, an evident glow.

In a recent number of the *Annales d'Oculistique*, Dr. Sichel has a paper upon amaurosis produced by tobacco-smoking. Few persons, he says, can continue to consume daily more than twenty grammes of tobacco without their vision or memory becoming impaired. The fumes of tobacco appear to act on the brain and on the origin of the optic nerves, thus producing passive chronic congestion, not very intense, but persistent and very obstinate. There are many smokers who may resist these effects for a long time, and the same can be said of other narcotics; the pernicious consequences, however, though slow in manifesting themselves, are none the less certain.

Use of Opium in the United States.—A writer in the New York *Journal of Commerce* has been making some investigations into the annual imports of opium into the United States since 1840. He says that:—

"While $40,874 paid the foreign cost of all the opium imported at the ports of the United States in 1840, it took $932,887 to pay the cost in the year ending June 30, 1862, an increase from forty thousand to nearly one million of dollars in less than twenty-five years.

"Of the large sum last mentioned, 30,482 pounds, valued at $96,174, were landed at Boston; 163,055 pounds, valued at $554,443, at New York; while the value of $281,796, mostly 'prepared' opium, was landed on the Pacific, chiefly for the use of the Chinese in California. It is true that the medical business connected with the army is responsible for a portion of this increase since the war began; but the statistics show a very heavy consumption of opium previous to the war—the imports for the year ending June 30, 1860, averaging over one hundred and twenty thousand pounds per annum. This is an enormous amount for the consumption of this country, and shows that a large number of people must use the drug habitually, in some form, for the gratification of their cravings for a stimulant. There may be less disgrace connected with its use, but the effects, mental and physical, are far more injurious than those which follow the abuse of alcoholic drinks, while the habit is much less easily cured or restrained."—*American Druggists' Circular.*

Eighty-three men were discharged and mustered out of the service at the Knight Hospital, New Haven, last week; three were admitted, and one died.

Dr. T. Townsend has been relieved from duty at the Knight Hospital, by order of the Department Medical Director, his services being no longer needed. He has been on duty since April 10th, 1863.

The graduating class at the recent Commencement of the University of Vermont, at Burlington, numbered thirty-two.

VITAL STATISTICS OF BOSTON.

For the Week ending Saturday, July 1st, 1865.

DEATHS.

	Males.	*Females.*	*Total.*
Deaths during the week - - - - - - -	40	41	81
Ave. mortality of corresponding weeks for ten years, 1853—1863,	35.4	33.6	69.0
Average corrected to increased population - - - -	00	00	76.27
Death of persons above 90 - - - - - - -	0	0	0

Married,—At Framingham, June 11th, Henry Allen, M.D., of Chicago, Ill., to Miss Nancie D. Brown, of Framingham.

Deaths in Boston for the week ending Saturday noon, July 1st, 81. Males, 40—Females, 41. Abscess, 1—accident, 1—congestion of the brain, 1—disease of the brain, 7—cachexia, 1—cancer, 1—cancrum oris, 1—cholera infantum, 8—consumption, 12—convulsions, 4—croup, 1—debility, 1—diarrhœa, 2—diphtheria, 1—dropsy of the brain, 2—drowned, 1—dysentery, 2—typhoid fever, 4—gastritis, 1—gangrene, 2—disease of the heart, 3—homicide, 1—infantile disease, 1—inflammation, 1—disease of the liver, 1—inflammation of the lungs, 4—marasmus, 1—old age, 2—puerperal disease, 2—pyæmia, 1—rheumatism, 1—smallpox, 2—syphilis, 1—unknown, 6.

Under 5 years of age, 33—between 5 and 20 years, 8—between 20 and 40 years, 20—between 40 and 60 years, 13—above 60 years, 7. Born in the United States, 59—Ireland, 15—other places, 7.